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93-02

Training Recommendations Based on Opposing Forces Practices

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United States Army Research Institute for the Behavioral and Social Sciences

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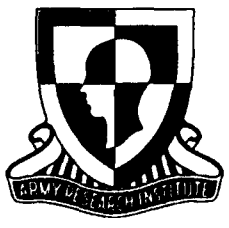

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13. ABSTRACT *(Maximum 200 words)*

This report is part of the studies and analyses program, the objective of which is to identify the performance characteristics that systematically differentiate effective and ineffective performers at the Combat Training Centers. After reliable differences have been identified among performers, the goal is to isolate those factors that might lead to the observed differences in performance. In an effort to improve the combat readiness of Army tactical units, the essential practices of the Opposing Forces (OPFOR) at the National Training Center (NTC) were reviewed with OPFOR Battalion and Company Commanders. The OPFOR were selected because of their consistently superior performance on the simulated battlefield. If selected techniques and practices employed by the OPFOR could be adopted and adequately practiced by Army tactical units, those units could improve their training status and thereby, their combat readiness. The study identifies four OPFOR practices that are likely to improve tactical unit performance. As Army tactical units adopt the recommended OPFOR training practices provided, the combat readiness of the force should be substantially increased.

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Study Report 93-02

Training Recommendations Based on Opposing Forces Practices

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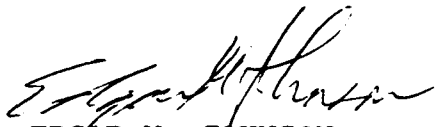
FOREWORD

Why do the opposing forces (OPFOR) units usually perform so much better at the National Training Center (NTC) than the rotational units, and how can the rotational units enhance their success on the simulated battlefield?

The OPFOR have the advantage of a detailed knowledge of the terrain at the NTC because of the amount of time they spend in the field. But the OPFOR also spend a substantial amount of time on task, or repetitive training, not available in the same form for the visiting rotational units at the NTC. Finally, the OPFOR have learned to focus their training on a few critical tasks that leads to a higher probability of combat success.

It may be possible for units to devote some of their time at home station to selective repetitive training to achieve mastery of those tasks that the OPFOR have found to be critical.

This study, supported by the Commanding General, Combined Arms Center-Training, collected information on four OPFOR training practices thought to be critical in developing effective unit performance. Units adopting these practices at home station are likely to reach an improved state of tactical training readiness.



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TRAINING RECOMMENDATIONS BASED ON OPPOSING FORCES PRACTICES

EXECUTIVE SUMMARY

Requirement:

Maneuver units training at the National Training Center (NTC) strive to reach the highest levels of readiness attainable. The Opposing Force (OPFOR) at the NTC usually performs in a superior manner. What practices followed by the OPFOR could be used by rotational units to improve their performance?

Procedure:

Successful performance has been defined as an output of inflicting more relative casualties on the enemy than relative friendly casualties suffered. Two OPFOR Battalion Commanders were individually interviewed and two pairs of Company Commanders were interviewed regarding strengths and weaknesses of their own as well as opposing units. At least two of these four interview sources identified practices that could be adopted by rotational or Blue Force (BLUEFOR) units to improve their home station training.

Findings:

Four OPFOR practices were recommended for adoption by Army tactical units: multiple integrated laser engagement system (MILES) gunnery, massed fires, weapons positioning, and engagement area selection. These practices have been identified as (1) likely to produce enemy casualties while preserving friendly forces, (2) not currently being utilized consistently by BLUEFOR units, and (3) likely to prove effective if practiced to standard at home station.

Utilization of Findings:

Adoption of the training recommendations offered in this study during home station training would be useful and could potentially improve the chances that Army tactical units will perform more effectively in combat.

TRAINING RECOMMENDATIONS BASED ON OPPOSING FORCES PRACTICES

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TRAINING RECOMMENDATIONS BASED ON OPPOSING FORCES PRACTICES

REQUIREMENT

The opposing forces (OPFOR) at the National Training Center (NTC) are generally credited with superior performance over rotational or Blue Force (BLUEFOR) units (Hiller, McFann & Lehowicz, 1990). The purpose of this study was to identify Tactics, Techniques, and Procedures (TTP) used by the OPFOR that the BLUEFOR can adapt to improve unit combat readiness.

METHOD

The first step involved defining what constitutes success or effective performance on the simulated battlefield. In the study cited earlier, success was considered to be a favorable casualty exchange ratio (Hiller, McFann & Lehowicz, 1990). In a study of two brigades, one high-performing and the other low-performing (Allan, Root, Lewman & McFann, 1989), the casualty exchange ratio was also employed as the measure of effectiveness. In the development of an assessment system for the NTC (Root & Zimmerman, 1988), friendly and enemy casualties figured prominently, as they do in the casualty exchange ratio. Based on reviewing these studies, success was defined as an output of inflicting more relative casualties on the enemy than relative friendly casualties suffered.

The next step was to determine what unit practices were likely to lead to effective performance, or produce the output of more enemy casualties while reducing friendly casualties. The method utilized for this purpose was the review of interviews conducted with OPFOR Battalion and Company Commanders related to strengths and weaknesses in unit performance at the NTC. As a part of the Home Station Determinants Project (McFann, 1990, p. 9), interviews were conducted in 1990 with two OPFOR Battalion Commanders and four OPFOR Company Commanders at the NTC.

A subsequent review of these interviews focused on techniques leading to improved lethality (causing enemy casualties) and survivability (preserving friendly forces). The criteria for selecting techniques or practices identified as improving lethality and/or survivability were as follows: (1) that they should appear in at least two of four possible OPFOR interview sources (Tank Battalion Commander, Mechanized Infantry Battalion Commander, Tank Company Commanders, or Mechanized Company Commanders); (2) that the technique identified be recognized as one <u>not</u> consistently well utilized by BLUEFOR; (3) that the practice be capable of being readily adapted to home station training by the

BLUEFOR; and (4) that the contribution to lethality and/or survivability should be clearly apparent.

FINDINGS

Four OPFOR techniques were consequently identified for potential adoption by rotational units to improve their home station training performance: MILES gunnery, massed fires, weapons positioning, and engagement area selection. Each of these techniques related directly to lethality or survivability; each was mentioned in at least two of the four categories of interview; each was identified as a BLUEFOR weakness; and all were practices that could be adapted to home station training by the BLUEFOR. These practices are provided in a lessons learned format in the Appendix.

MILES Gunnery. This was the factor most frequently singled out by OPFOR commanders, or the one upon which they most agreed, as being related to success on the simulated battlefield (Etchechury, 1990; Casmus & Doherty, 1990; Gordon & Pace, 1990; Jordan, 1990). The OPFOR commanders state unequivocally that the multiple integrated laser engagement system (MILES) must be boresighted, zeroed, and test fired. As conducted by the OPFOR, zeroing means not only firing the system to verify that the fall of the laser coincides with the aim of the sights, but also test firing to ensure that the targets are at maximum range for each of the weapons. If OPFOR crews cannot hit at maximum range, the MILES laser transmitter is exchanged. If the crew still cannot hit, the crew is changed until they can.

Aligning the laser (which simulates the weapons of the firing system in combat simulations) with the sights and ensuring that each weapon is effective at maximum range are clearly related to accurate fire and the production of enemy casualties. In most cases the BLUEFOR have not applied these skills. Since they have not been consistently applied and are clearly related to all the other techniques recommended for adoption, these skills were included.

As some BLUEFOR units have demonstrated the ability to develop training programs that successfully incorporate these skills, they can be adapted to the home station training program. It seems likely that BLUEFOR units effectively employing MILES Gunnery are able to provide additional time on task, or repetitive training, for this crew skill. Another possibility is that BLUEFOR units have the necessary skills, but the BLUEFOR leadership does not enforce consistently practicing the skills as the OPFOR does.

Massed Fires. This practice was emphasized primarily by the Armor OPFOR commanders (Etchechury, 1990; Casmus & Doherty, 1990), and obviously relates to lethality. Massed fires means bringing numerous firing systems to bear on a number of the enemy simultaneously. It can be used in offense or defense and requires command and control techniques to coordinate its effective employment. When the massed fires come from direct fire weapons, effective MILES gunnery, as outlined above, is a prerequisite for success. Failure to mass fires has proven to be a consistent and recurring BLUEFOR weakness as identified by OPFOR commanders. It can reasonably be expected that with emphasis on platoon and company level training at home station, more emphasis can be given to massing fires at this level--thereby leading to a corresponding improvement.

Weapons Positioning. This practice is directly related to the previous two techniques mentioned, MILES gunnery and massed fires, as well as to the next technique--engagement area selection. Weapons positioning entails selecting and preparing positions for individual combat vehicles with powerful direct fire weapons that can mass fires in an engagement area and provide good survivability potential for the vehicle.

Throughout their interviews, the OPFOR Company Commanders placed great emphasis on weapons positioning, drawing on valuable insight gained from experienced front-line ground fighting at the NTC (Casmus & Doherty, 1990; Gordon & Pace, 1990). Like MILES gunnery, certain BLUEFOR units have proven themselves adept at this practice, while others have not. Such inconsistent performance provides evidence that BLUEFOR units are quite capable of mastering such skills, but are obviously not consistently doing so.

While all other recommended practices outlined contribute primarily to lethality, this practice contributes about equally to lethality and survivability, and is performed primarily in the defense (although it may be used when positions are selected rather than prepared during counterattacks, movement to contact, overwatch, and when consolidating).

Engagement Area Selection. This practice makes use of all the previous techniques: to mass the fires of combat vehicles, from well selected positions, by crews well trained in MILES gunnery. Like massing fires, this practice requires active command and control and, when successfully executed, will produce increased enemy casualties. It also requires careful terrain analysis to select the engagement area most likely to result in destruction of the enemy forces by massed fires. This practice, primarily identified by the OPFOR Battalion Commanders, was acknowledged as essential to effective battlefield tactics (Etchechury, 1990; Jordan, 1990).

OPFOR commanders are consistent in stating that BLUEFOR units most often do not capitalize on this practice during their rotation to the NTC. In terms of BLUEFOR ability to adopt this practice, it is somewhat of a corollary to massing fires. Additional practice in platoon level training may provide the exercise experience necessary to obtain proficiency in this technique.

CONCLUSIONS AND RECOMMENDATIONS

Four OPFOR training techniques were selected for adoption by rotational (BLUEFOR) units for home station training, based upon meeting the criteria established for selection. If these techniques are practiced at home station on a repetitive basis and within the time and resources available, Army tactical units should improve their combat readiness.

The recommended techniques are as follows:

1. MILES Gunnery. Tank, Bradley, and TOW crews boresight, zero, and test fire each weapon. Boresighting is accomplished by aligning the bore and sights on the same target. Zeroing is done by firing the MILES weapon at a target equipped with MILES detectors. Test firing is accomplished with a MILES target at maximum weapon range, further refining the exactness of the zero. If crews cannot hit at maximum range, the MILES transmitter is exchanged or the crew is changed.

2. Massed Fires. Direct fires are massed in offensive and defensive operations by using fire commands and target reference points (TRPs).

3. Weapons Positioning. Combat vehicle commanders select vehicle positions that will enable them to effectively fire directly into engagement areas and on TRPs. Combat vehicle commanders physically check at ground level to verify that they will be able to observe and fire on targets once the vehicle is dug in, and then they prepare range cards.

4. Engagement Area Selection. Using terrain analysis, leaders and commanders select engagement areas during on-the-ground reconnaissance. Later they verify that combat vehicles can fire into the engagement area and are mutually supportive.

These recommended practices are listed in more detail in a lessons learned format in Appendix A.

The most efficient home station training method would appear to be a program concentrating more on platoon level training. Senior Army officers with extensive NTC experience have recommended that units emphasize platoon level training over battalion level training at home station (Word & Johnson, 1987; Glosup, 1988; Koren, 1988; Giusti, 1989; Butler, 1989).

An emphasis on platoon training should allow more exercises per day than if battalion exercises were the major focus. Army doctrine strongly supports repeated practice: "Based on experience, at least three repetitions...are required to achieve an improvement in combat proficiency (Department of the Army, 1982, p. 1-7)." Further, earlier research has shown a greater relative return on lower echelon repetitive training (Sulzen, 1987; Sulzen, Whitmarsh & Hart, 1989).

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APPENDIX

TOPIC: Fundamental TTP based on OPFOR Practices

DISCUSSION: Tactics, Techniques, and Procedures (TTP) are critical to effective performance on the battlefield. Field Manuals typically do not provide the detail necessary to put doctrine into effective practice. The unit itself must develop the detailed, tactical standing operating procedures (SOPs) that will make it effective in combat. The Opposing Force (OPFOR) at the National Training Center (NTC) have considerable experience in developing effective TTP during their many simulated battles. The following TTP have been identified as strengths by OPFOR Battalion and Company Commanders at the NTC, leading to an improved capability to cause enemy casualties and/or improve survivability. If these TTP are drilled sufficiently at platoon level and above, your unit will have an increased chance of success at the Combat Training Centers.

LESSONS:

A. MILES GUNNERY: Tank, Bradley, and TOW crews must boresight, zero, and test fire each weapon. Boresighting should be accomplished by following the appropriate manual to align the bore and sights on the same target. Zero by firing the MILES weapon at a target equipped with MILES detectors and furnished with a green key to allow resetting. Test fire at a MILES target at maximum weapon range, which further refines the exactness of the zero. Perform these checks daily, as well as verifying the strength of the MILES batteries. Develop combat vehicle tactical tables where MILES equipped vehicles oppose each other, to refine and develop tactical and MILES gunnery skills. Establish qualification requirements for each crew, and continue training runs until crew members qualify or are replaced.

B. MASSED FIRES: Mass direct fires in offensive and defensive operations by using fire commands and target reference points (TRPs). In offensive operations TRPs should be established by designating identifiable terrain features (use control points as TRPs when feasible). Plan for attack-by-fire positions, using this control measure as needed to mass direct fires. In the defense, employ sectors of fire and TRPs as control measures. Ensure that combat vehicles can provide mutual support, and practice massing fires during platoon drills, situation training exercises, and field training exercises.

C. WEAPONS POSITIONING: Develop the ability of combat vehicle commanders to select vehicle positions that will enable them to fire directly into engagement areas and on TRPs. Make sure vehicle commanders physically check at ground level to verify that they will be able to observe and fire on targets once the

vehicle is dug in. Ensure their ability to prepare an appropriate range card. Have them mark their proposed position with engineer stakes or other SOP means, and ensure that they can supervise the engineer preparation of a two step fighting position with turret defilade, and a firing step with hull defilade. Conduct practice by having vehicle commanders select and mark a vehicle firing position, followed by verifying its appropriateness.

D. ENGAGEMENT AREA SELECTION: Using terrain analysis, select engagement areas during on-the-ground reconnaissance. Have the combat vehicle commanders select positions that can fire into the engagement area and are mutually supportive. Select a MILES equipped target vehicle, issuing a green key to allow for MILES reset, and have the target vehicle proceed down major avenues of approach through the engagement area. Halt the target vehicle at key points along the avenue of approach, and verify that all vehicles can hit the target by firing their MILES weapon. Identify any deadspace along the avenues of approach, and plan alternate weapons to cover all deadspace. Consider repositioning vehicles as necessary to cover deadspace. Practice fire commands to mass fires in the engagement area while conducting repeated exercises to attain proficiency.